

Translation

## PATENT COOPERATION TREATY

# PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>P802909/WO/1</b>	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. <b>PCT/EP2004/004827</b>	International filing date ( <i>day/month/year</i> ) <b>06.05.2004</b>	Priority date ( <i>day/month/year</i> ) <b>25.06.2003</b>
International Patent Classification (IPC) or national classification and IPC		
<b>Applicant</b> <b>DAIMLERCHRYSLER AG</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <b>7</b> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: <ul style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <b>6</b> sheets, as follows:           <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</li> <li><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</li> </ul> </li> <li>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</li> </ul>
4. This report contains indications relating to the following items: <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Box No. I Basis of the report</li> <li><input type="checkbox"/> Box No. II Priority</li> <li><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li><input type="checkbox"/> Box No. IV Lack of unity of invention</li> <li><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li><input type="checkbox"/> Box No. VI Certain documents cited</li> <li><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</li> <li><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</li> </ul>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/004827

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- This report is based on translations from the original language into the following language \_\_\_\_\_ which is the language of a translation furnished for the purposes of:
- international search (Rule 12.3 and 23.1(b))  
 publication of the international application (Rule 12.4)  
 international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
- the international application as originally filed/furnished  
 the description:  
 pages 1, 2, 6, 7, 9–17 as originally filed/furnished 21.06.2004 with letter of 14.06.2004  
 pages\* 4, 5 received by this Authority on 19.04.2005 with letter of 11.04.2005  
 pages\* 3, 8 received by this Authority on 19.04.2005 with letter of 11.04.2005
- the claims:  
 nos. 1, 3–7, 9, 11–14, 17–22 as originally filed/furnished  
 nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19 19.04.2005 with letter of 11.04.2005  
 nos.\* 2, 8, 10, 15, 16 received by this Authority on 19.04.2005 with letter of 11.04.2005  
 nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- the drawings:  
 sheets \_\_\_\_\_ as originally filed/furnished  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_  
 sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3.  The amendments have resulted in the cancellation of:
- the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4.  This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- the description, pages \_\_\_\_\_  
 the claims, nos. \_\_\_\_\_  
 the drawings, sheets/figs \_\_\_\_\_  
 the sequence listing (*specify*): \_\_\_\_\_  
 any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V	<b>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>
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## 1. Statement

Novelty (N)	Claims	1-22	YES
	Claims		NO
Inventive step (IS)	Claims	1-22	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO

## 2. Citations and explanations (Rule 70.7)

- 1 The present report refers to the following documents:

D1: EP 0 928 296 B (AKZO NOBEL NV) 5 December 2001  
 (2001-12-05)

D2: US 4 511 596 A (BERNER GODWIN) 16 April 1985  
 (1985-04-16).

## 2 Novelty

## 2.1 Novelty of independent claims 1, 2, 14, 15 and 16

The subject matter of the invention, as disclosed in claims 1, 2, 14, 15 and 16, is novel with respect to the cited prior art documents D1 and D2 (PCT Article 33(2)).

The distinguishing technical feature is the free-radical polymerisation in the presence of a) an N,N,-diacyl hydroxylamine or its derivatives as initiator, and b) tertiary amines or metal ions, which can occur in a plurality of oxidation stages, as coinitiator.

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## 2.2 Novelty of dependent claims 3-13 and 17-22

Since the subject matter of all the independent claims is novel, the subject matter of all the dependent claims is likewise novel within the meaning of PCT Article 33(2).

## 3. Inventive step

## 3.1 Claims 1-22

Document D1 is the closest prior art. The problem to be solved by the present invention is understood to be that of providing storable initiator systems having a low activation temperature and suitable for thermally initiated free-radical polymerisation reactions of ethylenically unsaturated monomers and/or oligomers, which are also able to function in the presence of oxygen.

The applicant solved this problem by means of the distinguishing feature. A solution of this kind is not suggested in document D1 alone or in a combination with documents D1 and D2.

Consequently, the claimed initiator systems (based on N,N-diacyl hydroxylamines or their derivatives), their use for the cross-linking and curing of polymerisable preparations such as paints, glues, resins, moulding materials and

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**Box No. V**      **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

fillers, and polymerisation methods carried out in the presence of these initiator systems involve an inventive step within the meaning of PCT Article 33(3).

4. Industrial applicability

The invention is clearly industrially applicable in the field of thermally initiated free-radical polymerisation (PCT Article 33(4)).

5. The application satisfies the requirements of PCT Article 33(1).

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**Box No. VII      Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

6. Obvious errors in the structural formula (4) on page 4 and the structural formula (5) on page 5 of the original description were rectified by the applicant in the letter of 14 June 2004. The corrections satisfy PCT Rule 91.1(a) and (b).

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## Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

7. Bringing the description into line with an amended set of claims

Pursuant to PCT Rule 5.1(a)(iii), the description must disclose the invention as it is disclosed in the claims. Since this is not the case with the present application, PCT Rule 5 is not satisfied.

The presence of a coinitiator is not a necessary technical feature of all the independent claims. For this reason, all passages describing coinitiators as optional components must be reworded accordingly, for example on page 7, lines 6-19, page 8, lines 14-15 ("generally a plurality of oxidation steps"), page 11, lines 10-11 ("possibly"), page 11, lines 29-30 ("can ... be assisted by a coinitiator") and page 12, lines 1-2.

Page 13, lines 7-32, should clearly state that the invention concerns only coinitiator-containing systems and methods.